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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,677	10/06/2004	Mark Parrington	API-01-20-US	4967
7590 Patrick J Halloran Aventis Pasteur Inc Intellectual Property Kenerr Bldg One Discovery Drive Swiftwater, PA 18370				
			EXAMINER AEDER, SEANE	
			ART UNIT 1642	PAPER NUMBER
			MAIL DATE 04/21/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/510,677

**Applicant(s)**

PARRINGTON ET AL.

**Examiner**

SEAN E. AEDER

**Art Unit**

1642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 and 36-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 and 36-50 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)  
Paper No(s)/Mail Date 2/11/08
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Detailed Action***

***Election/Restriction***

The Election filed 2/11/08 in response to the Office Action of 1/9/08 is acknowledged and has been entered. Applicant elected group I with traverse. Applicant further elected the following species with traverse: ALVAC poxvirus vector.

The traversal is on the ground(s) that amended claim 1 indicates that the claimed expression vector must allow for expression of a CEA protein. Applicant further states that the claimed expression vector represents a significant contribution over the prior art. Applicant further argues that all of the claims require SEQ ID NO:28 or a fragment thereof and if SEQ ID NO:28 or fragments thereof represent patentable subject matter additional searches relating to particular vectors will not be required. This is not found persuasive. The inventions listed as groups I-II in the Office Action of 1/9/08 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The technical feature linking groups I-II appears to be that they all relate to the special technical feature of an expression vector comprising SEQ ID NO:28 or a fragment thereof. However, as discussed below, Paoletti et al (US Patent 5,833,975; 11/10/98) teaches an expression vector comprising a fragment of SEQ ID NO:28 that expresses a CEA protein (see abstract, in particular). Therefore, the technical feature linking the inventions of groups I-II does not constitute a special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art. Accordingly, groups I-II are not so linked by the same or a corresponding

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special technical feature as to form a single general inventive concept. Further, in regards to the argument that if SEQ ID NO:28 or fragments thereof represent patentable subject matter additional searches relating to particular vectors will not be required, claimed products comprising fragments of SEQ ID NO:28 do not represent patentable subject matter. For these reasons the restriction requirement is deemed to be proper and is therefore made FINAL.

Claims 1-30 and 36-50 are pending and are currently under consideration.

### ***Specification***

The specification is objected to for improper disclosure of polypeptide sequences (see page 15, in particular), as it fails to comply with the requirements of 37 CFR 1.821 through 1.825. This definition sets forth limits, in terms of numbers of amino acids and/or numbers of nucleotides, at or above which compliance with the sequence rules is required. Nucleotide and/or amino acid sequences as used in 37 CFR 1.821 through 1.825 are interpreted to mean an unbranched sequence of four or more amino acids or an unbranched sequence of ten or more nucleotides. (see MPEP 2422). Proper correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-30 and 36-50 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the instant case, the claims are inclusive of: **(1)** a genus of nucleic acids comprising fragments of SEQ ID NO:28 (see claim 1, for example), **(2)** a genus of nucleic acid molecules comprising nucleotides 421-1490 of SEQ ID NO:28 (see claim 45, for example), and **(3)** a genus of compositions comprising nucleic acid molecules "of" nucleic acid molecules comprising nucleotides 421-1490 of SEQ ID NO:28 (see claim 50). It is noted that a genus of nucleic acids comprising fragments of SEQ ID NO:28 includes nearly every imaginable polynucleotide, as fragments of SEQ ID NO:28 include single nucleotides. Further, claims drawn to nucleic acid molecules comprising fragments of SEQ ID NO:28 "including at least nucleotides 421-1490" (see claim 45) do not require that said fragments comprise *the* sequence set-forth as nucleotides 421-1490 of SEQ ID NO:28. Said claims do not require any particular order of nucleotides 421-1490. Rather, said claims encompass nucleic acid molecules comprising nucleotides 421-1490 *in any order*. Further, claims drawn to compositions comprising "an" isolated nucleic acid molecule of a polynucleotide (see claim 50) encompass compositions comprising any fragment of said polynucleotide, as fragments of said polynucleotides are nucleic acid molecules of said polynucleotides.

The written description in this case sets forth polynucleotides comprising *the* sequence set-forth in SEQ ID NO:28, polynucleotides comprising *the* sequence set-forth as nucleotides 421-1490 of SEQ ID NO:28, compositions comprising polynucleotides comprising *the* sequence set-forth in SEQ ID NO:28, and compositions comprising polynucleotides comprising *the* sequence set-forth as nucleotides 421-1490 of SEQ ID NO:28. The specification does not disclose, and the art does not teach the broad genera of variants as broadly encompassed by the claims.

A description of a genus may be achieved by means of a recitation of a representative number of species falling within the scope of the genus or by describing structural features common to that genus that "constitute a substantial portion of the genus." See University of California v. Eli Lilly and Co., 119 F.3d 1559, 1568, 43 USPQ2d 1398, 1406 (Fed. Cir. 1997): "A description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNA, defined by nucleotide sequence, falling within the scope of the genus or of a recitation of structural features common to the members of the genus, which features constitute a substantial portion of the genus."

The court has since clarified that this standard applies to compounds other than cDNAs. See University of Rochester v. G.D. Searle & Co., Inc., F.3d, 2004 WL 260813, at \*9 (Fed.Cir.Feb. 13, 2004). The instant specification fails to provide sufficient descriptive information, such as definitive structural or functional features that are common to the genera. That is, the specification provides neither a representative number of nucleic acids that encompass the genera nor does it provide a description of

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structural features that are common to the genera. Since the disclosure fails to describe common attributes or characteristics that identify members of the genera, and because the genera are highly variant, the disclosure of SEQ ID NO:28 is insufficient to describe the genera. Thus, one of skill in the art would reasonably conclude that the disclosure fails to provide a representative number of species to describe the genera as broadly claimed.

*Vas-Cath Inc. v. Mahurkar*, 19USPQ2d 1111, clearly states “applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention*. The invention is, for purposes of the ‘written description’ inquiry, *whatever is now claimed*.” (See page 1117.) The specification does not “clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed.” (See *Vas-Cath* at page 1116). The skilled artisan cannot envision the detailed chemical structure of the encompassed genera, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolation. The compound itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF’s were found to be unpatentable due to lack of written description for that broad class. The specification

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provided only the bovine sequence. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-30 and 36-50 are rejected under 35 U.S.C. 102(b) as being anticipated by Paoletti et al (US Patent 5,833,975; 11/10/98).

The claims are drawn to expression vectors comprising the nucleic acid sequence set-forth in SEQ ID NO:28 or fragments thereof.

Paoletti et al teaches ALVAC poxvirus vectors comprising SEQ ID NO:145, which comprises fragments of nucleic acids 421-1490 of SEQ ID NO:28 (see abstract and sequence comparison below, in particular). Paoletti et al further teaches said vectors further comprising additional tumor-associated antigens (see abstract, in particular), nucleic acid sequences encoding angiogenesis associated antigens (see EGFR at lines 1-15 of column 15, in particular), and nucleic acid sequences including the costimulatory molecule B7.1 (line 58 of column 14, in particular). Paoletti et al further teaches compositions comprising said vectors and pharmaceutically acceptable carriers (see



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line 22 of column 8, in particular). It is further noted that the nucleic acids of SEQ ID NO:145 includes all nucleic acids of 421-1490 of SEQ ID NO:28 (A, T, G, and C).

## Comparison of instant SEQ ID NO:28 and SEQ ID NO:145 of Paoletti et al:

```
Query Match          80.6%; Score 1697.8; DB 2; Length 2349;
Best Local Similarity 88.1%; Pred. No. 0;
Matches 1859; Conservative 0; Mismatches 247; Indels 3; Gaps
1;

Qy      1  ATGGAGTCTCCCTCGGCCCTCCCCACAGATGGTGCATCCCTGGCAGAGGCTCCTGCTC 60
      ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      184 ATGGAGTCTCCCTCGGCCCTCCCCACAGATGGTGCATCCCTGGCAGAGGCTCCTGCTC
243

Qy      61  ACAGCCTCACTTCTAACCTTCTGGAACCCGCCCACTGCCAAGCTCACTATTGAATCC
120      ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      244 ACAGCCTCACTTCTAACCTTCTGGAACCCGCCCACTGCCAAGCTCACTATTGAATCC
303

Qy      121 ACGCCGTTCAATGTCGCAGAGGGGAAGGAGTGCTTCTACTTGTCCACAATCTGCCCCAG
180      ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      304 ACGCCGTTCAATGTCGCAGAGGGGAAGGAGTGCTTCTACTTGTCCACAATCTGCCCCAG
363

Qy      181 CATCTTTTGGCTACAGCTGGTACAAAGGTGAAAGAGTGGATGGCAACCGTCAAATTATA
240      ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      364 CATCTTTTGGCTACAGCTGGTACAAAGGTGAAAGAGTGGATGGCAACCGTCAAATTATA
423

Qy      241 GGATATGTAATAGGAACCTCAACAAGCTACCCAGGGCCCGCATACAGTGGTCGAGAGATA
300      ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      424 GGATATGTAATAGGAACCTCAACAAGCTACCCAGGGCCCGCATACAGTGGTCGAGAGATA
483

Qy      301 ATATACCCCAATGCATCCCTGCTGATCCAGAACATCATCCAGAATGACACAGGATTCTAC
360      ||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      484 ATATACCCCAATGCATCCCTGCTGATCCAGAACATCATCCAGAATGACACAGGATTCTAC
543

Qy      361 ACCCTACACGTCATAAAGTCAGATCTTGTGAATGAAGAAGCAACTGGCCAGTTCCGGGTA
420      ||||||||||||||||||||||||||||||||||||||||||||||||||||
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	544	ACCCACACGTCATAAAGTCAGATCTTGTGAATGAAGAAGCAACTGGCCAGTTCCGGGTA
Qy 603		
	421	TACCCGGAACTCCCATAAGCCTTCTATTAGCTCCAATAATAGTAGCCCTGTCGAAGACAAA
Qy 480		
	604	TACCCGGAGCTGCCCAAGCCCTCCATCTCCAGCAACAACCTCCAAACCCGTGGAGGACAAG
Db 663		
	481	GATGCCGTGCCTTTTACATGCGAGCCCCAAACTCAAGACGCAACATATCTCTGGTGGGTG
Qy 540		
	664	GATGCTGTGGCCTTCACCTGTGAACCTGAGACTCAGGACGCAACCTACCTGTGGTGGGTA
Db 723		
	541	AACAACCAGTCCCTGCCTGTGTCCCTTAGACTCCAACCTCAGCAACGGAATAGAACTCTG
Qy 600		
	724	AACAATCAGAGCCTCCCGGTGAGTCCCAGGCTGAGCTGTCCAATGGCAACAGGACCCCTC
Db 783		
	601	ACCCTGTTTAACTGTACCAGGAACGACACAGCAAGCTACAAATGCGAAACCCAAAATCCA
Qy 660		
	784	ACTCTATTCAATGTCAAGAAGATGACACAGCAAGCTACAAATGTGAAACCCAGAACCCA
Db 843		
	661	GTCAGCGCCAGGAGGCTGTGATTCACTGATTCTCAACGTGCTTTACGGACCCGATGCTCCT
Qy 720		
	844	GTGAGTGCCAGGCGCAGTGATTCACTCATCTGAAATGTCCTCTATGGCCCGGATGCCCCC
Db 903		
	721	ACAATCAGCCCTCTAAACACAAGCTATAGATCAGGGGAAAACTGAATCTGAGCTGTCAT
Qy 780		
	904	ACCATTTCCTCTTAAACACATCTTACAGATCAGGGGAAAACTGAACCTCTCTGCCAC
Db 963		
	781	GCCGCTAGCAATCTCCCGCCAATACAGCTGGTTTGTCAATGGCACTTTCCAACAGTCC
Qy 840		
	964	GCAGCCTCTAACCCACCTGCACAGTACTCTTGGTTTGTCAATGGGACTTTCCAGCAATCC
Db 1023		
	841	ACCCAGGAACTGTTTCATTCCCAATATTACCGTGAACAATAGTGGATCCTACAGTGCCAA
Qy 900		
	1024	ACCCAAGAGCTCTTTATCCCCAACATCACTGTGAATAATAGTGATCCTATACGTGCCAA
Db 1083		
	901	GCTCACAAATAGCGACACCGGACTCAACCGCACAAACCGTGACGACGATTACCGTGTAT---
Qy 957		

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Db 1084 GCCCATAACTCAGACACTGGCCTCAATAGGACCACAGTCACGACGATCACAGTCTATGCA  
1143

Qy 958 GAGCCACCAAAACCATTCTAACTAGTAACAATTCTAACCCAGTTGAGGATGAGGACGCA  
1017

Db 1144 GAGCCACCAAAACCCCTTCATCACCAGCAACAACCTCCAACCCCGTGGAGGATGAGGATGCT  
1203

Qy 1018 GTTGCACTTAACCTGTGAGCCAGAGATTCAAAATACCACTTATTTATGGTGGGTCAATAAC  
1077

Db 1204 GTAGCCTTAACCTGTGAACCTGAGATTGAGAACACAACTACCTGTGGTGGGTAAATAAT  
1263

Qy 1078 CAAAGTTTGGCGTTAGCCACGCTTGACAGTTGTCTTAATGATAACCGCACATTGACACTC  
1137

Db 1264 CAGAGCCTCCCGGTGAGTCCAGGCTGACAGTGTCCAATGACAAACAGGACCTCACTCTA  
1323

Qy 1138 CTGTCCGTTACTCGCAATGATGTAGGACCTTATGAGTGTGGCATTGAAATGAATTATCC  
1197

Db 1324 CTCAGTGTCAAGGAATGATGTAGGACCTATGAGTGTGGAATCCAGAACGAATTAAGT  
1383

Qy 1198 GTTGATCACTCCGACCTGTTATCCTTAATGTTTTGTATGGCCAGACGACCAACTATA  
1257

Db 1384 GTTGACCACAGCGACCCAGTCATCCTGAATGTCCCTATGGCCAGACGACCCACCAATT  
1443

Qy 1258 TCTCCATCATACACCTACTACCGTCCCGCGTGAACCTTGAGCCTTTCTTGCCATGCGACA  
1317

Db 1444 TCCCCCTCATACACCTATTACCGTCCAGGGGTGAACCTCAGCCTCTCCTGCCATGCGAGCC  
1503

Qy 1318 TCCAACCCCTGACAGTACTCCTGGCTGATTGATGGAACATTGACAGCATACTCAA  
1377

Db 1504 TCTAACCCACCTGCACAGTATCTTGGCTGATTGATGGGAACATCCAGCAACACACACAA  
1563

Qy 1378 GAGTTATTTATAAGCAACATAACTGAGAAGAACAGCGGACTCTATACTTGCCAGGCCAAT  
1437

Db 1564 GAGCTCTTTATCTCCAACATCACTGAGAAGAACAGCGGACTCTATACCTGCCAGGCCAAT  
1623

Qy 1438 AACTCAGCCAGTGGTCACAGCAGGACTACAGTTAAAACAATAACTGTTTCCGCGGAGCTG  
1497

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Db 1624 AACTCAGCCAGTGGCCACAGCAGGACTACAGTCAAGACAATCACAGTCTCTGCGGAGCTG  
1683

Qy 1498 CCCAAGCCCTCCATCTCCAGCAACAACCTCCAACCCGTGGAGGACAAGGATGCTGTGGCC  
1557  
|||||  
Db 1684 CCCAAGCCCTCCATCTCCAGCAACAACCTCCAACCCGTGGAGGACAAGGATGCTGTGGCC  
1743  
|||||

Qy 1558 TTCACCTGTGAACCTGAGGCTCAGAACACAACCTACCTGTGGTGGGTAAATGGTCAGAGC  
1617  
|||||

Db 1744 TTCACCTGTGAACCTGAGGCTCAGAACACAACCTACCTGTGGTGGGTAAATGGTCAGAGC  
1803  
|||||

Qy 1618 CTCCCAGTCAGTCCCAGGCTGCAGCTGTCCAATGGCAACAGGACCCCTCACTCTATTCAAT  
1677  
|||||

Db 1804 CTCCCAGTCAGTCCCAGGCTGCAGCTGTCCAATGGCAACAGGACCCCTCACTCTATTCAAT  
1863  
|||||

Qy 1678 GTCACAAGAAATGACGCAAGAGCCTATGTATGTGGAATCCAGAACCTCAGTGAGTGCAAAC  
1737  
|||||

Db 1864 GTCACAAGAAATGACGCAAGAGCCTATGTATGTGGAATCCAGAACCTCAGTGAGTGCAAAC  
1923  
|||||

Qy 1738 CGCAGTGACCCAGTCACCCCTGGATGTCTCTATGGGCCGGACACCCCCATCATTTCCCC  
1797  
|||||

Db 1924 CGCAGTGACCCAGTCACCCCTGGATGTCTCTATGGGCCGGACACCCCCATCATTTCCCC  
1983  
|||||

Qy 1798 CCAGACTCGTCTTACCTTTTCGGGAGCGGACCTCAACCTCTCCTGCCACTCGGCCTCTAAC  
1857  
|||||

Db 1984 CCAGACTCGTCTTACCTTTTCGGGAGCGAACCCTCAACCTCTCCTGCCACTCGGCCTCTAAC  
2043  
|||||

Qy 1858 CCATCCCGCAGTATTCTTGGCGTATCAATGGGATACCGCAGCAACACACAAGTTCTC  
1917  
|||||

Db 2044 CCATCCCGCAGTATTCTTGGCGTATCAATGGGATACCGCAGCAACACACAAGTTCTC  
2103  
|||||

Qy 1918 TTTATCGCCAAAATCACGCCAAATAATAACGGGACCTATGCCTGTTTTGTCTCTAACTTG  
1977  
|||||

Db 2104 TTTATCGCCAAAATCACGCCAAATAATAACGGGACCTATGCCTGTTTTGTCTCTAACTTG  
2163  
|||||

Qy 1978 GCTACTGGCCGAATAATTCCATAGTCAAGAGCATCACAGTCTCTGCATCTGGAACCTCT  
2037  
|||||

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Db 2164 GCTACTGGCCGCAATAATCCATAGTCAAGAGCATCACAGTCTCTGCATCTGGAACCTTCT  
2223

Qy 2038 CCTGGTCTCTCAGCTGGGGCCACTGTCGGCATCATGATTGGAGTGCTGGTTGGGGTTGCT  
2097

Db 2224 CCTGGTCTCTCAGCTGGGGCCACTGTCGGCATCATGATTGGAGTGCTGGTTGGGGTTGCT  
2283

Qy 2098 CTGATATAG 2106  
|||||||

Db 2284 CTGATATAG 2292

### ***Summary***

No claim is allowed.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN E. AEDER whose telephone number is (571)272-8787. The examiner can normally be reached on M-F: 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sean E Aeder/  
Examiner, Art Unit 1642